

Serial Number: 10/006,611

CRF Processing Date: 5/3/02
Edited by: DC
Verified by: (STIC staff) Changed a file from non-ASCII to ASCII Changed the margins in cases where the sequence text was "wrapped" down to the next line. Edited a format error in the Current Application Data section, specifically:

ENTERED

 Edited the Current Application Data section with the actual current number. The number inputted by the applicant was the prior application data; or other _____ Added the mandatory heading and subheadings for "Current Application Data". Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer. Changed the spelling of a mandatory field (the headings or subheadings), specifically: Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were: Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited: Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place. Inserted colons after headings/subheadings. Headings edited included: Deleted extra, invalid, headings used by an applicant, specifically: Deleted: non-ASCII "garbage" at the beginning/end of files; secretary initials/filename at end of file;
 page numbers throughout text; other invalid text, such as _____ Inserted mandatory headings, specifically: Corrected an obvious error in the response, specifically: Edited identifiers where upper case is used but lower case is required, or vice versa. Corrected an error in the Number of Sequences field, specifically: A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted. Deleted ending stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected: Other: Inserted "hard return" to separate the lines at Seq. ID 4 - <210>

Re: The above corrections must be communicated to the applicant in the first Office Action. DO NOT send a copy of this form.

3/1/95



OIPE

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/006,611

DATE: 05/03/2002
TIME: 10:57:22

Input Set : A:\PTO.DC.TXT
Output Set: N:\CRF3\05032002\J006611.raw

4 <110> APPLICANT: Nezu, Jun-Ichi
5 Ose, Asuka
6 Jishage, Kou-ichi
7 Jenne, Dieter E.
9 <120> TITLE OF INVENTION: LKB1 GENE KNOCKOUT ANIMALS
11 <130> FILE REFERENCE: 06501-094001
13 <140> CURRENT APPLICATION NUMBER: US 10/006,611
C--> 14 <141> CURRENT FILING DATE: 2002-04-16
16 <150> PRIOR APPLICATION NUMBER: PCT/JP00/03504
17 <151> PRIOR FILING DATE: 2000-05-31
19 <150> PRIOR APPLICATION NUMBER: JP 11/153030
20 <151> PRIOR FILING DATE: 1999-05-31
22 <160> NUMBER OF SEQ ID NOS: 22
24 <170> SOFTWARE: FastSEQ for Windows Version 4.0
26 <210> SEQ ID NO: 1
27 <211> LENGTH: 1795
28 <212> TYPE: DNA
29 <213> ORGANISM: Mus musculus
31 <220> FEATURE:
32 <221> NAME/KEY: CDS
33 <222> LOCATION: (51)...(1358)
35 <400> SEQUENCE: 1
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37 Met Asp
38 1
40 gtg gcg gac ccc gag ccg ttg ggc ctt ttc tcc gag ggc gag ctg atg 104
41 Val Ala Asp Pro Glu Pro Leu Gly Leu Phe Ser Glu Gly Glu Leu Met
42 5 10 15
44 tcg gtg ggc atg gac acc ttc atc cac cgc atc gac tcc acc gag gta 152
45 Ser Val Gly Met Asp Thr Phe Ile His Arg Ile Asp Ser Thr Glu Val
46 20 25 30
48 atc tac cag ccg cgc aaa cgc gcc aag ctc atc ggc aag tac ctg 200
49 Ile Tyr Gln Pro Arg Arg Lys Arg Ala Lys Leu Ile Gly Lys Tyr Leu
50 35 40 45 50
52 atg ggg gac ctg ctc ggg gag ggc tcg tac ggc aag gtg aag gag gtg 248
53 Met Gly Asp Leu Leu Gly Glu Gly Ser Tyr Gly Lys Val Lys Glu Val
54 55 60 65
56 ctg gac tcc gag acc tta tgc cgc agg gcg gtc aag atc ctc aag aag 296
57 Leu Asp Ser Glu Thr Leu Cys Arg Arg Ala Val Lys Ile Leu Lys Lys
58 70 75 80
60 aaa aag ctg cgc agg atc ccc aat gga gag gcc aac gtc aag aag gag 344
61 Lys Lys Leu Arg Arg Ile Pro Asn Gly Glu Ala Asn Val Lys Lys Glu
62 85 90 95

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Input Set : A:\PTO.DC.TXT
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65	Ile	Gln	Leu	Leu	Arg	Arg	Leu	Arg	His	Arg	Asn	Val	Ile	Gln	Leu	Val	
66	100				105				110								
68	gac	gtg	ctg	tac	aat	gag	gag	aag	cag	aag	atg	tat	atg	gtg	atg	gag	440
69	Asp	Val	Leu	Tyr	Asn	Glu	Glu	Lys	Gln	Lys	Met	Tyr	Met	Val	Met	Glu	
70	115				120				125			130					
72	tac	tgc	gta	tgt	ggc	atg	cag	gag	atg	ctg	gac	agt	gtg	ccg	gag	aag	488
73	Tyr	Cys	Val	Cys	Gly	Met	Gln	Glu	Met	Leu	Asp	Ser	Val	Pro	Glu	Lys	
74					135				140			145					
76	cgc	ttc	cct	gtg	tgc	caa	gct	cat	ggg	tac	ttc	cgc	cag	ctg	att	gac	536
77	Arg	Phe	Pro	Val	Cys	Gln	Ala	His	Gly	Tyr	Phe	Arg	Gln	Leu	Ile	Asp	
78					150				155			160					
80	ggc	ctg	gaa	tac	cta	cac	agc	cag	ggc	att	gtt	cac	aag	gac	atc	aag	584
81	Gly	Leu	Glu	Tyr	Leu	His	Ser	Gln	Gly	Ile	Val	His	Lys	Asp	Ile	Lys	
82					165				170			175					
84	ccg	ggc	aac	ctg	cta	ctc	acc	acc	aat	ggc	aca	ctc	aag	atc	tcc	gac	632
85	Pro	Gly	Asn	Leu	Leu	Leu	Thr	Thr	Asn	Gly	Thr	Leu	Lys	Ile	Ser	Asp	
86					180				185			190					
88	ctc	ggt	gtt	gcc	gag	gcc	ctg	cac	cct	ttc	gct	gtg	gat	gac	acc	tgc	680
89	Leu	Gly	Val	Ala	Glu	Ala	Leu	His	Pro	Phe	Ala	Val	Asp	Asp	Thr	Cys	
90	195				200				205			210					
92	ccg	aca	agc	cag	ggc	tcc	ccg	gcc	ttc	cag	cct	cct	gag	att	gcc	aat	728
93	Arg	Thr	Ser	Gln	Gly	Ser	Pro	Ala	Phe	Gln	Pro	Pro	Glu	Ile	Ala	Asn	
94					215				220			225					
96	gga	ctg	gac	acc	ttt	tca	ggt	ttc	aag	gtg	gac	atc	tgg	tca	gct	ggg	776
97	Gly	Leu	Asp	Thr	Phe	Ser	Gly	Phe	Lys	Val	Asp	Ile	Trp	Ser	Ala	Gly	
98					230				235			240					
100	gtc	aca	ctt	tac	aac	atc	acc	acg	ggc	ctg	tac	cca	ttt	gag	ggg	gac	824
101	Val	Thr	Leu	Tyr	Asn	Ile	Thr	Thr	Gly	Leu	Tyr	Pro	Phe	Glu	Gly	Asp	
102					245				250			255					
104	aat	atc	tac	aag	ctc	ttt	gag	aac	att	ggg	aga	gga	gac	ttc	acc	atc	872
105	Asn	Ile	Tyr	Lys	Leu	Phe	Glu	Asn	Ile	Gly	Arg	Gly	Asp	Phe	Thr	Ile	
106					260				265			270					
108	cct	tgt	gac	tgc	ggc	cca	cca	ctc	tct	gac	cta	ctc	cga	ggg	atg	ttg	920
109	Pro	Cys	Asp	Cys	Gly	Pro	Pro	Leu	Ser	Asp	Leu	Leu	Arg	Gly	Met	Leu	
110	275				280				285			290					
112	gag	tat	gag	ccg	gcc	aag	agg	ttc	tcc	atc	cga	cag	att	agg	cag	cac	968
113	Glu	Tyr	Glu	Pro	Ala	Lys	Arg	Phe	Ser	Ile	Arg	Gln	Ile	Arg	Gln	His	
114					295				300			305					
116	agc	tgg	ttc	cg	aag	aaa	cac	cct	ctg	gct	gag	g	ctc	gta	cct	atc	1016
117	Ser	Trp	Phe	Arg	Lys	Lys	His	Pro	Leu	Ala	Glu	Ala	Leu	Val	Pro	Ile	
118					310				315			320					
120	cca	cca	agc	cca	gac	act	aag	gac	cg	tgg	cg	agt	atg	act	gta	gtg	1064
121	Pro	Pro	Ser	Pro	Asp	Thr	Lys	Asp	Arg	Trp	Arg	Ser	Met	Thr	Val	Val	
122					325				330			335					
124	ccc	tac	ctg	gag	gac	ctg	cat	ggc	cgt	g	cg	gag	gag	gag	gag	gaa	1112
125	Pro	Tyr	Leu	Glu	Asp	Leu	His	Gly	Arg	Ala	Glu	Glu	Glu	Glu	Glu	Glu	
126					340				345			350					
128	gac	ttg	ttt	gac	att	gag	gac	ggc	att	atc	tac	acc	cag	gac	ttc	aca	1160

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130	355				360				365				370				
132	gtg	cct	gga	cag	gtc	ctg	gaa	gag	gaa	gtg	ggt	cag	aat	gga	cag	agc	1208
133	Val	Pro	Gly	Gln	Val	Leu	Glu	Glu	Val	Gly	Gln	Asn	Gly	Gln	Ser		
134					375				380				385				
136	cac	agt	ttg	ccc	aag	gct	gtt	tgt	gtg	aat	ggc	aca	gag	ccc	cag	ctc	1256
137	His	Ser	Leu	Pro	Lys	Ala	Val	Cys	Val	Asn	Gly	Thr	Glu	Pro	Gln	Leu	
138					390				395				400				
140	agc	agc	aag	gtg	aag	cca	gaa	ggc	cga	cct	ggc	acc	gcc	aac	cct	gcg	1304
141	Ser	Ser	Lys	Val	Lys	Pro	Glu	Gly	Arg	Pro	Gly	Thr	Ala	Asn	Pro	Ala	
142					405				410				415				
144	cgc	aag	gtg	tgc	tcc	agc	aac	aag	atc	cgc	cgg	ctc	tcg	gcc	tgc	aag	1352
145	Arg	Lys	Val	Cys	Ser	Ser	Asn	Lys	Ile	Arg	Arg	Leu	Ser	Ala	Cys	Lys	
146					420				425				430				
148	cag	cag	tgactgaggc	ctacagtgtg	tcatcaggat	ctctggcag	gtgtccctgc										1408
149	Gln	Gln															
150	435																
152	aaggctgggt	tttccaggcc	tgccctgtcca	ctcacttcgg	gacgttggag	ccgaggcg											1468
153	acctgtgcc	ccagaagcac	tttatgtcga	gaccactggc	cgcccttgcc	tgcatgccgc											1528
154	cctgcgagcc	tcgctgtctt	ttgggtgggt	tctttttttt	taataaaaca	ggtggttttg											1588
155	agctatggct	atgaggggt	ttggaaatat	ggagcaggcg	gggcacaggg	tggcctgcag											1648
156	agaaaaaccag	agcaaacaaa	tatgcagaga	catttatgtat	taaccagaca	acacgaccaa											1708
157	ccacagaggg	cgcaggcag	ggagtggcga	ggcactcaca	gctgactgc	cctatctttt											1768
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168	Leu	Met	Ser	Val	Gly	Met	Asp	Thr	Phe	Ile	His	Arg	Ile	Asp	Ser	Thr	
169					20				25				30				
170	Glu	Val	Ile	Tyr	Gln	Pro	Arg	Arg	Lys	Arg	Ala	Lys	Leu	Ile	Gly	Lys	
171					35				40				45				
172	Tyr	Leu	Met	Gly	Asp	Leu	Leu	Gly	Glu	Gly	Ser	Tyr	Gly	Lys	Val	Lys	
173					50				55				60				
174	Glu	Val	Leu	Asp	Ser	Glu	Thr	Leu	Cys	Arg	Arg	Ala	Val	Lys	Ile	Leu	
175					65				70				75			80	
176	Lys	Lys	Lys	Lys	Leu	Arg	Arg	Ile	Pro	Asn	Gly	Glu	Ala	Asn	Val	Lys	
177					85				90				95				
178	Lys	Glu	Ile	Gln	Leu	Leu	Arg	Arg	Leu	Arg	His	Arg	Asn	Val	Ile	Gln	
179					100				105				110				
180	Leu	Val	Asp	Val	Leu	Tyr	Asn	Glu	Glu	Lys	Gln	Lys	Met	Tyr	Met	Val	
181					115				120				125				
182	Met	Glu	Tyr	Cys	Val	Cys	Gly	Met	Gln	Glu	Met	Leu	Asp	Ser	Val	Pro	
183					130				135				140				
184	Glu	Lys	Arg	Phe	Pro	Val	Cys	Gln	Ala	His	Gly	Tyr	Phe	Arg	Gln	Leu	
185					145				150				155			160	

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Input Set : A:\PTO.DC.TXT
Output Set: N:\CRF3\05032002\J006611.raw

186 Ile Asp Gly Leu Glu Tyr Leu His Ser Gln Gly Ile Val His Lys Asp
187 165 170 175
188 Ile Lys Pro Gly Asn Leu Leu Leu Thr Thr Asn Gly Thr Leu Lys Ile
189 180 185 190
190 Ser Asp Leu Gly Val Ala Glu Ala Leu His Pro Phe Ala Val Asp Asp
191 195 200 205
192 Thr Cys Arg Thr Ser Gln Gly Ser Pro Ala Phe Gln Pro Pro Glu Ile
193 210 215 220
194 Ala Asn Gly Leu Asp Thr Phe Ser Gly Phe Lys Val Asp Ile Trp Ser
195 225 230 235 240
196 Ala Gly Val Thr Leu Tyr Asn Ile Thr Thr Gly Leu Tyr Pro Phe Glu
197 245 250 255
198 Gly Asp Asn Ile Tyr Lys Leu Phe Glu Asn Ile Gly Arg Gly Asp Phe
199 260 265 270
200 Thr Ile Pro Cys Asp Cys Gly Pro Pro Leu Ser Asp Leu Leu Arg Gly
201 275 280 285
202 Met Leu Glu Tyr Glu Pro Ala Lys Arg Phe Ser Ile Arg Gln Ile Arg
203 290 295 300
204 Gln His Ser Trp Phe Arg Lys Lys His Pro Leu Ala Glu Ala Leu Val
205 305 310 315 320
206 Pro Ile Pro Pro Ser Pro Asp Thr Lys Asp Arg Trp Arg Ser Met Thr
207 325 330 335
208 Val Val Pro Tyr Leu Glu Asp Leu His Gly Arg Ala Glu Glu Glu Glu
209 340 345 350
210 Glu Glu Asp Leu Phe Asp Ile Glu Asp Gly Ile Ile Tyr Thr Gln Asp
211 355 360 365
212 Phe Thr Val Pro Gly Gln Val Leu Glu Glu Glu Val Gly Gln Asn Gly
213 370 375 380
214 Gln Ser His Ser Leu Pro Lys Ala Val Cys Val Asn Gly Thr Glu Pro
215 385 390 395 400
216 Gln Leu Ser Ser Lys Val Lys Pro Glu Gly Arg Pro Gly Thr Ala Asn
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220 Cys Lys Gln Gln
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224 <211> LENGTH: 5876
225 <212> TYPE: DNA
226 <213> ORGANISM: Mus musculus
228 <220> FEATURE:
229 <221> NAME/KEY: exon
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233 <222> LOCATION: (85)...(677)
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236 <222> LOCATION: (678)...(767)
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RAW SEQUENCE LISTING
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Input Set : A:\PTO.DC.TXT
Output Set: N:\CRF3\05032002\J006611.raw

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260 <222> LOCATION: (2244)...(2301)
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282 gtacaatgag gagaagcaga agatataatcc tgggggtgga gtgggctggg gtggccctgt 120
283 tggtaggggc tggaaagcctt ctgcaaggcc tctggcagca atagtgcata atgtcatcct 180
284 gtgggtgcctg tcaagtcatac aggccagggg gcaaggcatg gggcttccac ctgggtccag 240
285 cctgttctga gcagtggtggc tgggactggg catggcctca cagggacttg gggcttatgt 300
286 acattgacag ggcccccggcgt ggttcttagag gtttccatgc tgcccttcc cagaggtaga 360
287 ggttgcacag cctacgttgc atctgggcag tcctgggagc attctgagaa cccagtgc 420
288 tgcagcccca actcctggta cccatctctc cctgtggcta gtacaccagc tgatttcagt 480
289 cctgttgtaa tctatgtca ctccatgtgg tccaagtca tgggtggc ttgtggaccc 540
290 tggtagtact gatagggagc gcagaatggc gggagagcag agtgggtggt gtcgttggc 600
291 ccagcggggc cctccagacc actgttgcta ggagcaggcc tcctgggctt ggtgtgtgc 660
292 ttcccttagc gccctacgtatggatg ggtactgc tatgtggcat gcaggagatg 720
293 ctggacagtg tgccggagaa gcgcttccct gtgtgccaag ctcatgggtg agtgcctgc 780
294 tgggtgcagg aggagcagcc attgtcagga aaccagggtg tttctgggccc cccagtttt 840
295 aaccctggca atgtgcttag ggttaccctc ttgtttaggccc ctgtgtgtccc gtcgcctgc 900
296 agagccatag tgggtctgag tcctgttca ggtactccagg ttcagcagaa tcacatcccc 960
297 tggtagtgcag agaacaaggaa gaagggaaagg gaagggaaagca agccagaggg gaaacctggc 1020
298 tcctgggccc tgggcagcag tgactgccc ttgcctgtg taattttagt gggccagcc 1080
299 tctgactctc aggtctgttt gcctgagccc taaacatcta tcaccttgc ggcaggtct 1140
300 catgagtctc ccaaacttca tatcagactt atgttagtac catggtatgg gctgagacac 1200
301 tggggccctt gagccagtcc caccattca ggtacttccg ccagctgattt gacggcctgg 1260
302 aatacctaca cagccaggc attgttacaca aggacatcaa gcccggcaac ctgtactca 1320

VERIFICATION SUMMARY
PATENT APPLICATION: US/10/006,611

DATE: 05/03/2002
TIME: 10:57:23

Input Set : A:\PTO.DC.TXT
Output Set: N:\CRF3\05032002\J006611.raw

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L:235 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:3
L:238 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:3
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Does Not Comply
Corrected Diskette Needed

OIPE

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/006,611

DATE: 04/30/2002
TIME: 14:47:06

Input Set : A:\06501-094001.TXT
Output Set: N:\CRF3\04302002\J006611.raw

4 <110> APPLICANT: Nezu, Jun-Ichi
5 Ose, Asuka
6 Jishage, Kou-ichi
7 Jenne, Dieter E.
9 <120> TITLE OF INVENTION: LKB1 GENE KNOCKOUT ANIMALS
11 <130> FILE REFERENCE: 06501-094001
13 <140> CURRENT APPLICATION NUMBER: US 10/006,611
C--> 14 <141> CURRENT FILING DATE: 2002-04-16
16 <150> PRIOR APPLICATION NUMBER: PCT/JP00/03504
17 <151> PRIOR FILING DATE: 2000-05-31
19 <150> PRIOR APPLICATION NUMBER: JP 11/153030
20 <151> PRIOR FILING DATE: 1999-05-31
22 <160> NUMBER OF SEQ ID NOS: 22
24 <170> SOFTWARE: FastSEQ for Windows Version 4.0

ERRORED SEQUENCES

223 <210> SEQ ID NO: 3
224 <211> LENGTH: 5876
225 <212> TYPE: DNA
226 <213> ORGANISM: Mus musculus
228 <220> FEATURE:
229 <221> NAME/KEY: exon
230 <222> LOCATION: (1)...(84)
232 <221> NAME/KEY: intron
233 <222> LOCATION: (85)...(677)
W--> 235 <221> exon
236 <222> LOCATION: (678)...(767)
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254 <222> LOCATION: (1853)...(1980)
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Output Set: N:\CRF3\04302002\J006611.raw

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283 tggtaggggc tggaaagcctt ctgcaaggcc tctggcagca atagtgcata atgtcatcct 180
284 gtgggcctg tcagtcatac aggcaggggc gcaaggcatg gggctccac ctgggtccag 240
285 cctgttctga gcagtggtgc tgggactggg catggcctca cagggacttg gggcttatgt 300
286 acattgacag ggccccggct ggttctagag gtttccatgc tgccccttc cagaggtaga 360
287 ggttgcacag cctacgttgc atctggcag tcctggcagc attctgagaa cccagtgc 420
288 tgcagcccca actcctggta cccatctctc cctgtggcta gtacaccagc tgatttcagt 480
289 cctgtttaa tctatgctga ctccatgtgg tccaagtca tgggtgtgc ttgtggaccc 540
290 tggtagtact gatagggagc gcagaatggc gggagagcag agtgggtgtg gtctgttggc 600
291 ccagcggggc cctccagacc actgttgcata ggagcaggcc tccctgggtt ggtgtgtgc 660
292 tttccttagc gcccctacgta tatggtgatg gagtactgcg tatgtggcat gcaggagatg 720
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294 tgggtgcagg aggacgaccc attgtcagga aaccagggtg tttctggcc cccagtttt 840
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296 agagccata ggggtctgag tcctgttca gtcctccagg ttcagcagaa tcacatcccc 960
297 tggtagcag agaacaaggaa gaaggaaagg gaaggaagca agccagagg gaaacctggc 1020
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299 tctgactctc aggtctgtt gcctgagccc taaacatcta tcaccttgcg ggccaggct 1140
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301 tggggccct gagccagtcc caccattca ggtactccg ccagctgatt gacggcctgg 1260
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307 gtcacactgt aagtgtctt gttgtaccct gttagcagatg gggggctgtg gttttccct 1620
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313 ggagaggaga cttcaccatc cttgtgact gcccggcacc actctctgac ctactccgag 1980
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RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/006,611

DATE: 04/30/2002
TIME: 14:47:06

Input Set : A:\06501-094001.TXT
Output Set: N:\CRF3\04302002\J006611.raw

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317	aaggccaagg	ggatggatgc	tgttagtggtg	ctgttagcaca	aaggcggcac	ctgctacact	2220
318	cacttatctc	ttctgtccta	cagggatgtt	ggagatgag	ccggccaaga	gttctccat	2280
319	ccgacagatt	aggcagcaca	ggtgagcatg	gccggcctgt	ctcagcctgc	tgggggtctg	2340
320	agctgagaac	atggtctcag	aggtgctagg	tcatcacagg	agtaaggatc	agtgtgtgt	2400
321	gtgtattgtat	gtctggaaag	gctgtgtgt	aacttgggt	gtgacagggg	tgcccaatgc	2460
322	aggcctccct	acctttatca	ttttgttcag	gagtgcaggc	gttatgtggc	ctgagaagct	2520
323	gtagattttaa	gggcctagaa	ttagagacgg	atcctccat	ggtggggagg	gaggagtaga	2580
324	tggggaaatgt	tcacttttga	tcccagctgt	tccttggcca	tctggacatg	aaaatgtgtc	2640
325	tagggaggcc	aacagaagc	gtgaggcatg	gtgtcttcc	tcacctgagg	ctaagagcct	2700
326	tctggtaaac	agtggagcct	ctgtctccc	tttgtttatt	taccagctgg	tcaagacctt	2760
327	tgggtccagg	cttctctgtc	ctcttctccc	ttcatgctag	actgagactg	gctcagctgg	2820
328	gtgtccccca	gtgagggtt	ctagcctatac	cgtgttcaag	gcgggtggga	ctataggtgc	2880
329	agggacactga	ttgcccaccc	tagtccaagg	cgctgtggct	gtcatcagtg	gttgggtggtt	2940
330	tgtgccagtg	ctatgggtgt	taggtctact	caaggcctgt	gccggagcac	taaggcctcg	3000
331	tcttatgtaa	ggacagccat	ggtgtgggt	ttgggtggta	ttggccagcc	gtgtcacakag	3060
332	tgcctggcac	ctgatgtctg	tgctgcactt	ggccttctt	agctggtcc	ggaagaaaaca	3120
333	ccctctggct	gaggcgtcg	tacctatccc	accaagccca	gacactaagg	accgctggcg	3180
334	cagtatgact	gtagtccct	acctggagga	cctgcattgc	cgtgcggagg	aggaggagga	3240
335	ggaagacttg	tttgacattt	aggacggcat	tatctacacc	caggacttca	cagtgcctgg	3300
336	taagctggct	ttgcgcagct	cctactggag	ctggtgactt	tgtgcactt	ggggctggtc	3360
337	cccttcccaa	gtctccagcc	agctaacatg	agccaccagg	actgccaag	ccatcctgg	3420
338	ggctgtggca	tttcaactctg	ggcttagatga	agggtccct	ggctgcattt	agcaggagga	3480
339	ggggAACCC	ggaggcagt	gggttagggc	cctgagacag	ccacctgagg	gagggtccag	3540
340	tggccctcg	tcctggccat	gcctgacctt	atatgcctt	cttccccagg	tgtcgaggag	3600
341	gcggccgagg	cagggttag	cgaggatgca	tgcgacacat	gcatgtgaa	gaccagggc	3660
342	gcaggcccttc	ctggagagga	gcccggaggag	gggtttgggg	ctttagtgt	gctccctgtc	3720
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349	cagtatggcc	cttggccaca	gccctttctt	aggtttaaag	catccctatg	tggaaatagt	4140
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352	cttaaggctg	ctgtgggtt	aaggaaggca	agggtctggg	gacactgtt	ggccatggag	4320
353	cccatttgtc	aaatggggta	gtgttgcaca	gagtaagt	accgtctt	gaggatagcc	4380
354	tgtatccctt	gtacttggca	tgagggttgc	actctgcagc	aacaggacag	gggtttctt	4440
355	ctcagtgcc	tgtgtggagg	agggggacaga	tgcttctca	gagtccacct	gacctcaagc	4500
356	ctcagtgcc	tgcagagt	gccagagtgg	gtgtctgt	tgtggccaag	tcaagggtt	4560
357	tgggagagaa	attctggatc	caggagcgtt	ggcagtgggc	tgtgtctgg	gttccacagc	4620
358	cgcattgcca	agcactggac	tgtggagtt	catgtagaca	ctgacccctt	gagcctggga	4680
359	agcttcagga	gaggccatct	tttgccttcc	tgcgaggggc	ggccaaacaga	gcaagctgg	4740
360	ctgcagccct	cagctggat	atctccctt	cggtctcat	cgcagctgt	agctccagg	4800
361	ccgaatgttt	catctccctt	tgcctgtact	gaggtcttag	agcctcttcc	ttggagagct	4860
362	ctgtgagctg	gtgtgggtt	gcccaggctt	gacaggcagg	tgagcgttgg	catgtctgcag	4920
363	gagggccagg	gcatacgact	gtgaaggcag	tggccctgt	tgccttttgg	gtactgtt	4980

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/006,611

DATE: 04/30/2002
TIME: 14:47:06

Input Set : A:\06501-094001.TXT
Output Set: N:\CRF3\04302002\J006611.raw

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366	taggacaggt	cctgaaagag	gaagtgggtc	agaatggaca	gagccacagt	ttgcccagg	5160
367	ctgtttgtgt	aatggcaca	gagccccagc	tcagcagcaa	ggtgaaggca	gaaggccgac	5220
368	ctggcaccgc	caaccctgcg	cgcaagggtgt	gctccagcaa	caagatccgc	cggctctcg	5280
369	cctgcaagca	gcagtgtactg	aggcctacag	gtgggcatgg	gcctgggtcc	agccatccct	5340
370	ggtgttcaca	gtgggtgtct	gctgggctcc	tagtccttc	ccgttagggca	gtgctgcaag	5400
371	ggggaaagggtc	tggtggttga	ggtggtaacta	agtgaccacc	cattctacca	acagtgtgtc	5460
372	atcaggatct	ctgggcaggt	gtccctgcaa	ggctgggttt	tccaggcctg	cctgtccact	5520
373	cacttcggga	cgttggagcc	gagggcggac	ctgctgcccc	agaagcactt	tatgtcgaga	5580
374	ccactggccg	gccttgcctg	catgccgccc	tgcgagcctc	gctgtctttg	ggttgggttc	5640
375	ttttttttta	ataaaaacagg	tggatttgag	ctatggctat	gagggtgttt	gaaatatatgg	5700
376	agcaggcggg	gcacagggtg	gcctgcagag	aaaacccaga	gcaaacaat	atgcagagac	5760
377	atttatgatt	aaccagacaa	cacgaccaac	cacagaggc	gcagggcagg	gagtgggcag	5820
E--> 378	gcactcacag	cgagtctgcc	ctatcttttgc	gcaataaaata	aagcttggga	aacttg	5876<210> 4
379	<211> LENGTH: 33						
380	<212> TYPE: DNA						
381	<213> ORGANISM: Artificial Sequence						
W--> 383	<220> FEATURE:						
384	<223> OTHER INFORMATION: Artificially Synthesized Primer Sequence						
W--> 386	<210> SEQ ID NO:						
E--> 386	<400> SEQUENCE: 4						
387	gatgaattcc	gaaggacaga	ggacaaagag	tgg			33
E--> 389	<210> SEQ ID NO: 5						

↑ insert hard
return here

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/006,611

DATE: 04/30/2002
TIME: 14:47:07

Input Set : A:\06501-094001.TXT
Output Set: N:\CRF3\04302002\J006611.raw

Invalid Line Length:

The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:3; Line(s) 378

Skipped Sequences(NEW RULES):

Sequence(s) missing. If intentional, please use the following format for each skipped sequence.

<210> sequence id number
<400> sequence id number
000

Seq#:4

VERIFICATION SUMMARY
PATENT APPLICATION: US/10/006,611

DATE: 04/30/2002
TIME: 14:47:07

Input Set : A:\06501-094001.TXT
Output Set: N:\CRF3\04302002\J006611.raw

L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:235 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:3
L:238 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:3
L:241 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:3
L:244 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:3
L:247 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:3
L:250 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:3
L:253 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:3
L:256 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:3
L:259 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:3
L:262 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:3
L:265 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:3
L:268 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:3
L:271 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:3
L:274 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:3
L:277 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:3
L:280 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:3
L:378 M:254 E: No. of Bases conflict, LENGTH:Input:4 Counted:5878 SEQ:3
L:378 M:320 E: (1) Wrong Nucleic Acid Designator, NUMBER OF INVALID KEYS:9
L:378 M:252 E: No. of Seq. differs, <211> LENGTH:Input:5876 Found:5878 SEQ:3
L:386 M:282 W: Numeric Field Identifier Missing, <210> is required.
L:386 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQUENCE ID NOS:3 differs:4
L:389 M:214 E: (33) Seq.# missing, SEQ ID NO:4